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Re-evaluation of the taxonomic status of *Phylloscopus goodsoni* Hartert

by Per Alström, Urban Olsson & Peter R. Colston

Received 26 November 1993

In 1903 Katsumata obtained two specimens of a *Phylloscopus* warbler on Hainan Island, south China, which were later named *Phylloscopus goodsoni* (Hartert 1910). Ticehurst (1938) did not recognize *goodsoni* as a distinct species, but treated it as a subspecies of *P. ricketti* (breeding in south-central China). This latter treatment was followed by, for example, Williamson (1967), Watson *et al.* (1986) and Howard & Moore (1991). Cheng (1987) treated both *P. ricketti* and *goodsoni* as subspecies of *P. cantator* (breeding in northeastern India and Burma). Both of the specimens of *goodsoni* available to Hartert are in the American Museum of Natural History, New York (AMNH) (male collected at Lei Muimon on 12 January 1903, AMNH No. 450282 [type], and male collected on south Hainan on 22 December 1903, AMNH No. 450283). There is also one specimen in the Natural History Museum, Tring (BMNH), which shows the characters of *goodsoni* and is accepted as such in this paper. It was collected by J. Delacour and P. Jabouille at Konang Tcheou Wan in southwestern Guangdong Province, just north of Hainan Island, on 17 March 1933 (BMNH Reg. No. 1935.10.23.577) and labelled as *P. reguloides fokiensis*.

Description of *goodsoni*

Lateral crown-stripes olive-grey, darker posteriorly than anteriorly. Pale median crown-stripe more olive-tinged and less well defined on the anterior than on the posterior part. Upperparts uniformly green. Double pale yellow wing-bars, the one on the greater coverts relatively broad, the one on the median coverts narrower. Underside yellow, deepest on throat and breast, becoming paler towards the rear. White margin on inner web of outermost tail-feather ≤ 1 , 0.5 and 1 mm, respectively, in the three specimens. Lower mandible all pale. In the three specimens P9, counted descendently, falls between P4/P3, P2/P1 and P3/P2, respectively, and P8 between P6/P5, \approx P5 and P6/P5, respectively. P5-P8 are emarginated. Measurements of wing, tail and bill are given in Table 1. All three specimens are labelled as males, but the short wing and tail of one individual indicate that it may actually be a female, as suggested by Hartert (1910).

TABLE 1

Measurements of wing (maximum length; Svensson 1992) and tail of males of all races of *Phylloscopus hainanus*, *P. davisoni*, *P. reguloides* and *P. ricketti*. The measurements were taken on specimens in the American Museum of Natural History and the Natural History Museum, Tring, and on live individuals

	n	Wing			n	Tail		
		range	mean	s.d.		range	mean	s.d.
<i>P. hainanus</i>	8	49.5–56.0	53.4	1.98	7	35.5–41.0	38.9	1.99
<i>P. d. davisoni</i>	11	51.0–57.0	54.5	1.95	11	37.5–42.5	40.4	1.59
<i>P. d. disturbans</i>	6	55.5–58.0	56.3	0.88	6	39.0–40.0	39.8	0.41
<i>P. d. ogilviegranti</i>	5	53.5–56.0	54.6	1.08	4	37.0–39.5	38.1	1.03
<i>P. d. klossi</i>	10	51.0–57.5	54.6	1.74	10	38.5–44.5	41.0	2.42
<i>P. r. kashmiriensis</i>	4	58.0–60.0	59.3	0.96	4	40.0–45.0	43.3	2.36
<i>P. r. reguloides</i>	8	58.0–64.5	60.5	2.36	8	38.5–47.5	43.1	2.85
<i>P. r. assamensis</i>	26	54.0–63.0	58.5	2.47	26	38.0–48.0	42.6	2.86
<i>P. r. claudiae</i>	7	58.5–65.5	62.8	2.40	7	41.5–46.5	44.7	1.78
<i>P. r. fokiensis</i>	14	58.5–64.5	61.0	1.53	14	39.5–46.5	43.0	1.69
<i>P. r. ticehursti</i>	6	57.5–61.5	60.2	1.47	6	44.0–50.0	46.8	2.25
<i>P. r. goodsoni</i>	3	54.5–61.0	58.0	3.28	3	38.0–41.0	40.0	1.73
<i>P. ricketti</i>	15	54.0–59.0	56.2	1.42	15	35.0–38.0	36.7	1.18

Comparisons of *goodsoni* to similar taxa

The crown pattern of *goodsoni* matches that of *P. reguloides* (Fig. 1) and *P. davisoni*. It is less striking than in *P. ricketti*, in which the lateral crown-stripes are contrastingly blackish throughout their lengths and the median crown-stripe is pale yellow and well marked throughout its length. The crown pattern of *goodsoni* is less distinct than in *P. cantator*, which shows darker and more uniformly coloured lateral crown-stripes, approaching *P. ricketti*. The crown pattern of *goodsoni* is also clearly different from that of *P. hainanus* in which the lateral crown-stripes are paler (only slightly darker than the mantle) and the median crown-stripe more distinct anteriorly (see plate 1 of Olsson *et al.* 1993).

The colour of the underparts of *goodsoni* is intermediate between *P. ricketti* and the yellowest subspecies of *P. reguloides* and *P. davisoni*. They are paler yellow in *goodsoni* than in *P. hainanus*, and clearly different from *P. cantator*, which shows clear yellow throat, breast and undertail-coverts, contrasting with white belly and flanks. In *goodsoni*, as well as in *P. ricketti*, *P. cantator* and most subspecies of *P. reguloides*, the outer rectrices show narrow pale margins to the inner webs. In contrast, in *P. hainanus* the two outermost pairs are largely white, and in all subspecies of *P. davisoni* except *ogilviegranti* the outermost pair is extensively white.

The wing formula of *goodsoni* is similar to that of *P. reguloides fokiensis* and differs only slightly from *P. ricketti*. It differs from both



Figure 1. From left to right: *Phylloscopus reguloides fokiensis* (AMNH No. 450258, type specimen), *P. ricketti goodsoni* (AMNH No. 450283), *P. ricketti goodsoni* (AMNH No. 450282, type specimen) and two individuals of *P. r. ricketti*. (Photo: Per Alström).

P. hainanus and *P. davisoni* in that there is no emargination on P4. Judging from the available measurements of males (Table 1), *goodsoni* is slightly smaller than *P. reguloides*. However, the wide range in wing-length of the three specimens of *goodsoni* suggests that the smallest one may be wrongly sexed, in which case the measurements may be even more similar to *P. reguloides*. Compared to *P. ricketti*, both the average wing- and tail-length of *goodsoni* are larger, a difference that would be further enhanced if the smallest *goodsoni* is a female. On the other hand, the average bill-length of *ricketti* exceeds that of *goodsoni* (Table 2). In all races of *P. davisoni*, the wing-lengths are on average shorter than in *goodsoni*. *P. davisoni* further differs from *goodsoni* by its (on average) shorter bill (Table 2).

Discussion

It is difficult to decide the taxonomic position of *goodsoni* on the basis of a sample of only three specimens. The specimens are, however, distinctive enough to warrant such an attempt. They differ significantly and consistently from all other taxa, and as all three specimens come from the same geographical area, *goodsoni* should be retained as a distinct taxon. However, we do not agree with earlier authors that it should be treated as a subspecies of *P. ricketti*. Hartert considered the species to stand between *P. ricketti* and *P. trochiloides* (reference to *P. trochiloides* in this context certainly refers to *P. reguloides*, which in those days was included in *P. trochiloides*). In our opinion, the pattern of the crown shows that *goodsoni* is more closely related to *P. reguloides* and *P. davisoni* than to *P. ricketti*. This character is not subject to any significant intraspecific variation in *P. reguloides* and *P. davisoni*, unlike

TABLE 2

Measurements of bill (measured to skull) of males of all races of *Phylloscopus hainamus*, *P. davisoni*, *P. reguloides* and *P. ricketti*. The measurements were taken on specimens in the American Museum of Natural History and the Natural History Museum, Tring and on live individuals

	n	range	mean	s.d.
<i>P. hainamus</i>	8	12.2–12.4	12.5	0.24
<i>P. d. davisoni</i>	11	11.1–12.3	11.7	0.36
<i>P. d. disturbans</i>	6	11.0–12.1	11.6	0.48
<i>P. d. ogilviegranti</i>	5	11.3–12.5	12.0	0.52
<i>P. d. klossi</i>	17	11.0–12.8	11.8	0.58
<i>P. r. kaslunensis</i>	4	12.1–13.3	12.6	0.51
<i>P. r. reguloides</i>	6	11.6–13.0	12.5	0.48
<i>P. r. assamensis</i>	20	11.4–13.1	12.3	0.49
<i>P. r. claudiae</i>	7	12.3–13.9	13.1	0.57
<i>P. r. fokiensis</i>	11	12.3–13.4	12.9	0.41
<i>P. r. ticebursti</i>	6	11.9–13.1	12.5	0.53
<i>P. r. goodsoni</i>	3	12.7–13.1	12.8	0.23
<i>P. ricketti</i>	15	13.0–14.0	13.4	0.26

the colour of the underparts, size and wing formula, which are all very variable features. The size, wing formula and tail pattern, which beside general colouration are the main morphological differences between *P. reguloides* and *P. davisoni*, indicate that *goodsoni* belongs with *P. reguloides*. On present knowledge, we suggest *goodsoni* be treated as a subspecies of *P. reguloides*.

It is not known where *goodsoni* breeds. Since the two specimens of *goodsoni* from Hainan were collected in midwinter, they may have been only wintering there. We have not seen any *goodsoni* on any of three spring visits to Hainan, and we are not aware of any sightings by others. However, until quite recently the situation was obscured by the fact that *P. hainamus*, breeding on Hainan (Olsson *et al.* 1993), was believed to be synonymous with *goodsoni*. Neither Etchécopar & Hùe (1983), nor Meyer de Schauensee (1984) nor Cheng (1987) list *P. reguloides* from Hainan. The specimen of *goodsoni* from the mainland just north of Hainan on 17 March may have been a bird on the breeding grounds, although it cannot be ruled out that it was on migration.

Summary

The taxonomic status of *Phylloscopus goodsoni* Hartert is evaluated. The most accepted treatment up to now has been to place it with *P. ricketti*. This paper presents evidence that it is better treated as a subspecies of *P. reguloides*, which it closely resembles except for being more yellow on the underparts than any other subspecies.

Acknowledgements

We are most grateful to the American Museum of Natural History, and in particular to Mary LeCroy, for much assistance during P.A.'s visit there, and to R. A. Sloss for

sending one specimen of *goodsoni* on loan to PRC at Tring. Dr. Per Sundberg and Dr. R. Prÿs-Jones read earlier drafts and made many useful and constructive comments.

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Noteworthy bird observations from Chile

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Received 19 April 1994

Like other South American countries, much remains to be learned about the avifauna of Chile, particularly with respect to local distribution of resident species and the status of non-breeding migrants. Hellmayr (1932) first summarised the general distribution of Chilean birds, and the excellent works by Goodall *et al.* (1946, 1951) and Johnson (1965, 1967, 1972) filled in more details, particularly concerning natural history. Araya & Millie (1986) incompletely summarise the distributional information of these earlier works. A number of recent authors have added observations on the status and distribution of Chilean birds, e.g. Howell (1975), Rasmussen & Lopez (1988), Marin *et al.* (1989), Sallaberry *et al.* (1992), and Vuilleumier *et al.* (1993).

We visited Chile for ten weeks in the austral spring and early summer, from 8 November to 11 December 1992 and 31 October to 6 December 1993, and Howell visited Chile for a further five weeks, 24 October to 26 November, and 18 December 1994. During these visits we travelled through virtually the entire country observing birds. We here report new information concerning 36 species, including data kindly contributed by R. S. Ridgely (RSR in following text).